

High-Strength Copper Titanium Alloy

NKT322(HB)

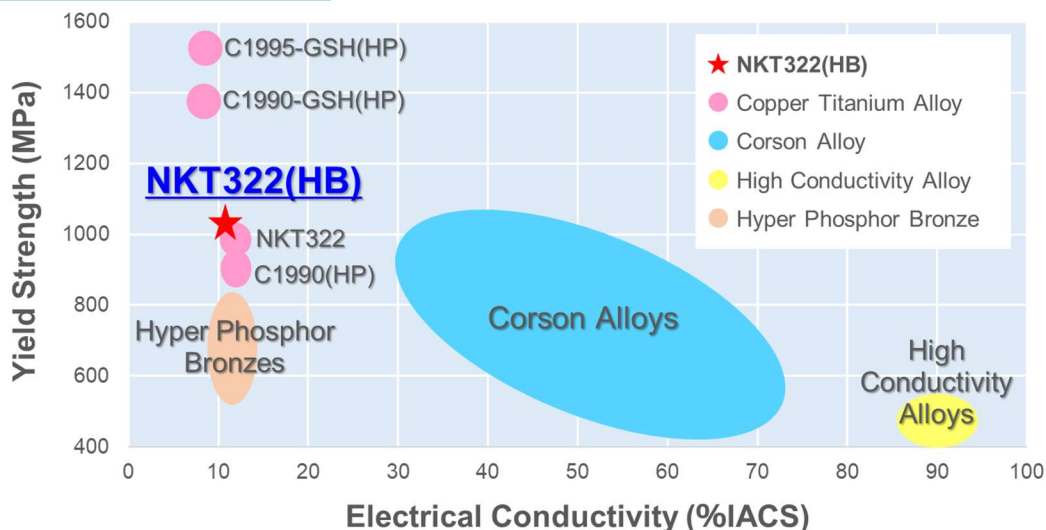
UNS C19910

※Data in this sheet are typical values (not specification).

Features

- NKT322(HB) has better bend formability and higher strength than conventional NKT322 by optimizing the manufacturing process conditions without changing chemical composition.
- Even for thin materials with a thickness of 0.10 mm or less, NKT322(HB) is difficult to deform plastically due to its high strength and has excellent drop impact resistance.

Our Copper Alloy Lineup



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Material Properties

1. Chemical Composition

Element	Cu	Ti	Fe
Nominal Value (wt%)	Bal.	3.2	0.2

2. Physical Properties

Electrical Conductivity (%IACS) (@20°C)	11
Specific Resistance (nΩ·m) (@20°C)	157
Thermal Conductivity (W/(m·K))	51
Thermal Expansion Coefficient ($\times 10^{-6}/K$) (@20~200°C)	18.0
Modulus of Elasticity (GPa)	120
Specific Gravity	8.70

Material Properties

3. Mechanical Properties

Temper	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (Hv)
ESH	1050 (980 - 1200)	1000 (950 - 1050)	7.0 (≥ 2.0)	340
XSH	1100 (1030 - 1250)	1050 (1000 - 1100)	5.0 (≥ 1.0)	350

Upper : Typical value, Lower : Standard range

4. W-Shaped 90 degree Bend Formability

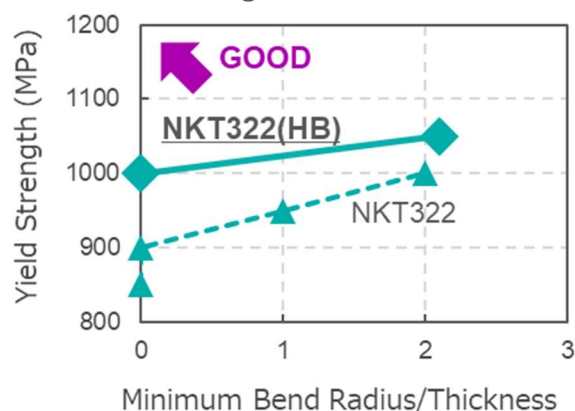
Width (mm)	Temper	Minimum Bend Radius / Thickness	
		Good Way	Bad Way
10	ESH	0	0
	XSH	0	2.1 (0※1)

Thickness : 0.06 mm

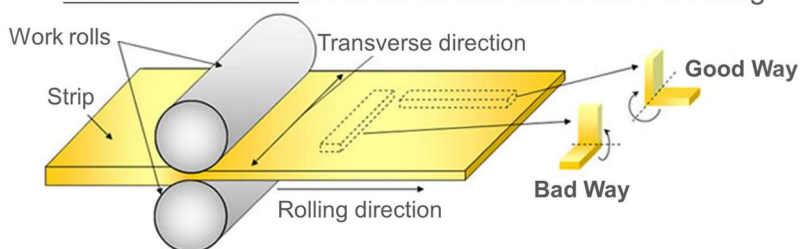
※1 Data is for specimen with 0.20 mm in width

In accordance with Japan Copper and Brass Association technical standard (JCBA T307)

Material Strength vs. Bend Formability



Bend direction from schematic illustration of rolling



Test Conditions

- 90° W bending test
- Bend direction : Bad Way
- Width : 10 mm
- Thickness NKT322 : 0.08 mm
NKT322HB : 0.06 mm

Production Thickness Range

Temper	Thickness Range (mm)
ESH	0.05 ~ 0.10
XSH	0.04 ~ 0.10

- Please contact us for the latest stock status and inquiry of other thicknesses.

Contact Address

Web Site : <https://www.jx-nmm.com/english/>

NKT322(HB) introduction URL : https://www.jx-nmm.com/english/products/copper_foil_and_alloy/02cuti/nkt322hb.html

JX Advanced Metals Corporation

Functional Materials Division

Advanced Materials Group

10-4, Toranomom 2-chome, Minato-ku, Tokyo 105-8417, Japan

Call : +81-3-6433-6000



JX Advanced Metals Corporation